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TECHNICAL AMERICA

1938

MARCH

EMPLOYED BY THE PUBLIC

INDUSTRIALIZATION OF HOUSING

ENGINEERS IN AUTO

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FROM THE EDITOR'S DESK

FAECT Wins Another Case

Word comes just as we are going to press, that the National Labor Relations Board has handed down its decision on the U. S. Testing Laboratories case.

U. S. Testing Laboratories, in Hoboken, N. J., one of the largest laboratories in the country, refused to recognize the FAECT, claiming that chemists and technicians in its employ could not properly constitute a unit of collective bargaining. FAECT, having organized a majority of the technicians there, filed charges with the Labor Board which then upheld the FAECT claim and certified it as the sole collective bargaining agency without calling for an election since it was proven that the Federation represented the majority of the technicians at the plant.

One of the serious grievances is the wage scale. Many technicians receive as little as $20 per week, and even less, working in responsible positions.

The FAECT has not lost a single case before the NLRB.

From the SDE

South Bend, Ind.

Doubtless various of our members will be glad to subscribe to TECHNICAL AMERICA when I have been able to familiarize them with it.

I congratulate you upon a publication of which you can justly be proud.

I am of the opinion that as our organizations draw closer, in cooperation and understanding, exchanges between our publications will be desirable and of great value, if properly guarded.

To this end I think all such exchanges should pass through the hands of our respective editorial staffs. We will be glad to send you matter to publish from time to time, subject, of course, to your approval.

Wishing you the best of success and assuring you of our desire to cooperate as best we can, I again thank you for the evidence of your cooperation.

L. Q. RAY
South Bend Chapter
Society of Designing Engineers

This Recession

Boston, Mass.

There is today a great cry that the banks are loaded with money, and are merely waiting for a return of "confidence" for it to find eager borrowers. This is sheer nonsense. If "we the people" had the money with which to buy, that is, if there were a demand, the supply would follow no matter who was in the White House or what the re-discount rate was. What we lack is just this money to buy with, and it has been drawn off from our common supply by the large profits in certain fields. To illustrate.

Judging from the price range of gasoline across the country, from the Federal suit against the oil companies in Wisconsin, and from the reports of cooperatives, the loot of the oil industry *per year* is about a billion dollars. (Do you wonder that they want no excess profit or reserve tax?) The sheet steel industry is laying off 85,000 men because of improved machinery, and the price of the product is unchanged. We have all read the testimony regarding the big bankers. Life insurance is in the same class. Add retaining fees of corporation lawyers, astronomical salaries of officials, etc., and we get a staggering total. Divide this among all of us and it would not be very much per person, but let it be drawn from the purchasing pool year after year and the pool dries up.

We have been kept going since 1933 by the returning of these profits to the purchasing power pool via government spending. When this returning stopped, as it did last spring when the Federal income from all sources equalled the total outgo, we collapsed. We will stay collapsed until either the government returns these profits to the pool by taxing them or borrowing them, or until the corporations cease to, or are restrained from, drawing them off. It is a case of government spending or trust-busting or both. Till then, tighten your belt.

E. S. P.

Organizing Medium

Washington, D. C.

It may interest you to know that we are using TECHNICAL AMERICA as an organizing medium in the Washington Navy Yard with excellent results, and are sending out copies of it to prospective members, and paying the cost.

MILTON FISCHER,
Legislative Representative,
FAECT, Washington, D. C.

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TECHNICAL AMERICA is published monthly by the Federation of Architects, Engineers, Chemists and Technicians, International Union-CIO, 116 East 16th Street, New York, N. Y. A publication designed to keep technical employees informed of cultural, economic or other developments in their professions. All members and readers are invited to submit manuscripts, photographs or correspondence. TECHNICAL AMERICA is not responsible for such manuscript if lost. No part of this magazine may be used without permission. Publication office, 116 E. 16 Street, New York, N. Y.. Subscription rates: $1.00 per year to Federation members; $1.50 per year to non-members. 15c per copy. Entered as second-class matter October 5th, 1937, at the Post Office at New York, N. Y., under the Act of March 3rd, 1879. Volume 5, No. 3, March 1938.

TECHNICAL AMERICA

PUBLISHED BY FEDERATION OF ARCHITECTS, ENGINEERS, CHEMISTS AND TECHNICIANS

(International Union—Affiliated with the Committee for Industrial Organization)

VOL. V, No. 3 — MARCH, 1938

Employed By The Public

ROLAND A. WANK

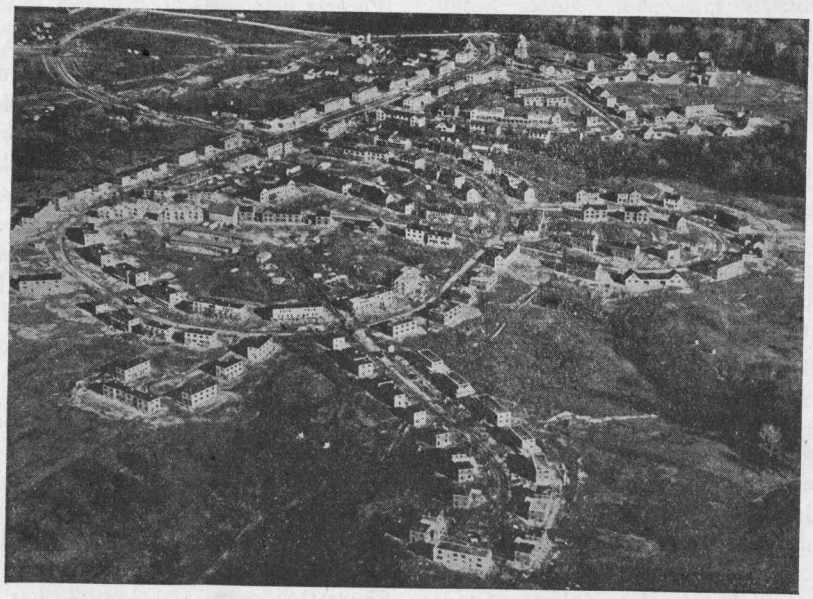
The Principal Architect of the TVA records his views on the place of the architect in public works. His opinions are equally applicable to all who go by the general name, technician.

ONE of the ways in which recent social changes impinged upon the life of the profession is the growing practice of direct employment of architects by public agencies. Leaving aside hot contests which have grown up around this development, and also the consideration of relative job security, working conditions and salaries, this brief discussion is devoted to some of the professional aspects of the situation.

Apparently in line with a world-wide trend, a growing proportion of construction projects falls into the classification of public works. Structures devoted to traditionally governmental functions, such as courthouses, city halls, etc., keep pace with progressive urbanization, with added impetus from city beautification and city planning movements. More importantly, accepted service functions of governments, such as schools and institutions, mails, fire and police protection, water supply, garbage and sewage disposal, have not only multiplied in a somewhat geometric ratio with growing urban concentration, but have also, due to technological advances, called for ever greater investment in plant and structures. Finally, the field of public services has undergone an unprecedented expansion to include not only health centers, swimming pools, parks, irrigation works, etc., but also public power plants, housing projects, resort developments, municipal transportation, freight terminals, airports, markets and so forth. At the same time, the function performed by the architect receives increasing recognition and gradually expands to cover structures which had usually been thought of as open-and shut utilitarian problems, e.g. bridges, disposal plants, subway stations or docks. This situation led many governments to favor the employment of architectural talent on the public payroll in order to have at their disposal expert judgment developed through continuity of occupation with the problems peculiar to public projects.

If the trend continues, many practitioners and employees now in private life and perhaps a still larger percentage of the college students may look to eventual governmental positions. It may be interesting therefore to explore the character of such public employment, the attitudes which promote its success and the criteria by which such success may be gauged.

The first and most obvious impression lying in wait for recent recruits of governmental offices is inherent in the large scale of most governmental organizations. Practicing architects, of course, are used to fighting their own battles, reaching their own decisions and taking their own credit or blame. Because most architectural offices are small, the majority of professional employees are close enough to these processes to identify themselves with the firm and to develop the same habits of thinking. To both, it is somewhat of a shock to wake up as parts of a large piece of machinery, with restraints upon free decision on all sides, their responsibilities diluted by the control exercised in other parts of the organization and with their identities largely submerged. Many will hammer away at these restraints and, unsuccessful, flee public service forever. Many will disgustedly resign themselves and continue without enthusiasm. Some in both groups will have come from the ranks of those



Above—Resettlement Administration Development.
Front page—A portion of Wheeler Dam under construction, with highway floor beams over the Spillway piers. *Photo by Charles Krutch, TVA.*

who believe that public interest could best be promoted by public action and who, therefore, approached their tasks with great zeal in addition to their professional competence.

The necessary adjustment includes the realization that governments are by definition large pieces of machinery; that on account of their size and their responsibility to the rather elusive concept of public interest they have to be organized with checks and balances; therefore, they move slowly and patience becomes an essential virtue. On the other hand, the permanence also implied in their definition diminishes the importance of speed. The individual may feel thwarted in his urge for perfect accomplishment, the architectural project may have been more satisfactory without those restraints, *but*, when through sustained, plodding efforts of its members the whole large organization moves one step forward, that movement is a permanent gain with widespread and cumulative results.

Another aspect of public employment which may compensate for its shortcomings and at the same time differentiates it startlingly from private work is the client-architect relationship. To the private practitioner the client is clearly tangible — he is whoever signs the checks, or at least someone definitely connected with that person. The client usually guards or at least defines his own interests and renders his own decisions. Except in residential work for owners (who usually do not hesitate to impress their needs, preferences and financial limitations upon their architect) or in semi-public institutional projects, architecture is usually governed by the profits which are the objective of the operation, whether they will result directly from the structure or from the purposes for which it will be used.

The client of the governmental employee is the public. The objective of his projects is the usually controversial public interest. The checks are drawn upon the public treasury, ultimately upon the taxpayers. Taxpayers and the public are almost the same, but not quite. As a matter of fact, if one listens to the loud conflicts raging around the most worth-while (and non-liquidating) public works, there appears to be a distinct conflict. That part of the public which by reason of its lower income contributes a lesser share of taxes stands to benefit most from such projects. The group which pays higher per capita taxes objects, often loudly, because its members can purchase equivalent advantages for themselves for less than their share of the common improvement.

At this point the architect has to lay aside his 6B pencil, pull out a lot of statistical tables and become a social planner. Difficult as decisions may be between first cost and maintenance, quality and rentability in private practice, they become doubly involved when they really represent arbitration between two groups which proclaim opposite interests. Assuming, for instance, that the project is a hospital: how far below the optimum should one aim to balance the taxpayers reluctance with the citizens need? On a courthouse or post office the question may arise in a different way: how far above a practical office building should one set his sights to comply with the traditional aura of semi-royal splendor with which those structures customarily render homage to civic pride, without drawing too heavily upon a budget upon which urgent social needs have an unsatisfied claim?

Purely theoretical as such questions may seem, they permeate the entire program from preliminary budgeting to the selection of toilet partitions. Stripped of incidental issues peculiar to each case, it really comes down to the fact that the person or group in responsible charge of public projects renders judgment on what part of the national wealth may be justly devoted to the contemplated construction and what part of the national income could be fairly devoted to its operation and maintenance. Since all elements of the problem — national wealth, national income, and what might be their fair distribution — are vague concepts, such judgments are at present shots in the dark, to be rendered more accurate with time and experience, until (if ever) national planning may become a reality.

While grappling with these problems, the architect may take consolation in the essential contrast from which they arise: that while private practice uses a tangible measure, it is calibrated in dollars and cents of profit, with public benefits, if any, incidental and accruing to a more or less restricted group. Public employment, with all its ponderousness and lack of clear guide-posts, is slowly evolving a philosophy and tradition of translating social objectives into practical accomplishment.

Thumb Nail History

The following is a short resume of the history of the place of coal in the industrial world, as explained by Watson Davis in his address before the convention of Chemical Workers held recently.

COAL is the only one of the four great raw materials, the others being air, water and wood, that is not renewed by nature. It was deposited in the earth's savings bank of rock layers ages ago when giant reptiles ruled the earth. And man is using it at an alarming rate, not so fast, it is true as he is using petroleum and natural gas, but in relation to the age of the earth or the age of mankind, man is the great spendthrift of all time.

Originally the United States had about three and one-half trillion tons. So far we have used about one per cent of our national reserve. In a hundred years or more that doesn't seem large, and people who are quick at arithmetic may figure that our coal bin ought not to be empty for five thousand years. But coal arithmetic is not that simple.

We have been using up the richest and most conveniently located coal seams in America. Later we shall have to work harder for the coal we need. And the heating value of that inferior coal is far below the average grade of coal mined today. Moreover, it seems likely, the demand for fuel to turn the wheels and heat the furnaces of our highpowered civilization will rise continually. The coal bin is probably not going to hold out for five thousand years. In fact, if we assume that the demand for fuel will increase as it has, then the United States' reserves will be running low in about four centuries.

There are various ways of helping to stave off the future coalless ages. One urgent need is to reduce the waste in coal. To utilize coal properly and efficiently, continued research is necessary. Magnificent returns are given society by the relatively small expenditures upon the chemical, physical and other researches carried out by scientists.

Let's Have Highways

STUART GREEN

THE United States has no highways. That is essentially the fact. There are a few thousand miles of roads owned by the United States Government in the various National Parks, it is true; and thousands of miles of forest fire patrol roads have been built; but what of national highways?

True, routes have been marked across the various state highways to afford the national traveler a guide across the country. This at best takes advantage of the little coordination that can be obtained through the limited authority and control exercised by the Bureau of Public Roads of the Department of Agriculture.

An undeniable fact is that millions have been given to the states by Congress through such bills as the Hayden-Cartwright Federal Aid Act. This money has, for the most part, been used on the "federal aid routes." Construction on these has had to conform to certain standards set by the Bureau of Public Roads. This is good, but very insufficient.

Our government has met every emergency that has arisen. The Congress has, upon occasion, declared war spending billions upon billions of dollars. It has ordered the entire national railroad system taken over and operated. It has spent billions keeping a good army in shape, building battleships and keeping the navy shipshape. But with every section of the country in crying need of national highways as an outlet for over 25,000,000 automobiles, Congress has not had the courage to even seriously consider the construction of a modern, up-to-date streamlined highway system.

Theorists point out that it would be simple for the national government to lay out a national system, recommend to the states that each build to conform with it, and—presto, we would have a system of national highways. But realists point out that, almost without exception, State Highway Departments are shot through and through with politics. This makes highway locations subject to political control within each state. The federal government could recommend, it is true, but to paraphrase an old adage, "You can't control what you don't own."

Here is a problem, then, to tax the efforts of the most capable among our engineers.

The problem is many fold. First, where would the money come from to finance a system of national super-highways? We have been shown amply in the past few years that our money experts, our economists, and our financiers have failed to make our money and credit system operate to the advantage of the mass of people of the United States. Of course we have heard it whispered that perhaps their efforts were not too wholeheartedly in that direction, but about that we wouldn't know.

It is about time that the able brains among our engineers gave thought to this problem of financing such necessary public works as a network of national highways. Engineers have often been heard to remark, "Let the money moguls furnish the funds and we can build the projects."

We would like to warn, that under no circumstances should engineers allow themselves to again become party to the building of public works by bonds. Bonds, with their millstone of interest hung on the people, are the dry rot of financial civilization.

But why have you, as an engineer, had pounded into your consciousness since you were a fledgeling in school that financing of engineering projects always originate with private capital? Why are the finances of public projects always dependent on the money supply instead of the labor supply available? Did it ever occur to you that if you really thought out the problem the answer might seem too simple, and too obvious, and that you and your opinions might become dangerous to the control of this money supply? Crystallize this fact in your mind. The only, single reason that is given you for not doing these great engineering public works is that, "There is not the money available."

(*Continued on Page* 19)

The writer of this article presents an opinion which might be classified as "rank and file." He is a registered professional highway engineer with nearly ten year's experience in highway construction and design. He is now on leave from highway work and is spending full time as General Secretary of Chapter 30, St. Paul, Minn. of the FA ECT. Comment on this article is invited.

Communication Trends

Based on the section on communication of the National Resources Committee's report on "Technical Trends and National Policy."

WITHIN the last half century an entirely new kind of long distance communication has made itself an integral part of our society. Where once all communication beyond the range of the human voice had to be carried on by means of some kind of arbitrary signal —carried bodily as marks on paper or, more recently, transmitted electrically as the dots and dashes of the telegraph— we now have an actual extension over limited distances of the human senses themselves. As regards the sense of hearing, this development is now complete; with radio and telephone it is possible to hear the voice of anyone anywhere in the world. The same extension of the sense of sight is clearly indicated within the next decade or two, and analogy if nothing else suggests something similar will happen to tactual and olfactory communication.

The social effects of the radio and telephone have been so widely canvassed that it seems unnecessary to elaborate on them here. Though British-Italian propaganda wars in the Near East and fascist directional aerials pointed toward Brazil throw an odd light on prophecies of increased international understanding. And there are serious problems for decomcracy in the growing importance of a medium which is intrinsically monopolistic because of the limited number of wave bands.

The ten dollar receiver was probably the last socially important development in audible radio. Future developments in receivers will be along the line of refinements in tone quality and ease of operation. A continual broadening of the range of the spectrum available for radio use is going on, relieving somewhat the crowded condition of the regular wave channels; this development will

(*Continued on Page* 19)

The ABC Of Union Contracts

FAECT's National Organizational Director Explains What Trade Unions Aim To Achieve Through Contracts

MARCEL SCHERER

THE individual contract signed between the company and the employee has been the characteristic practice in the technical profession. This has been so in the past and remains even today the more frequent practice where contracts are actually signed.

Under the individual contract the employee has no protection whatsoever. He is told that he is being employed by the company for a stipulated period of time and at a certain rate of pay. This contract can be terminated at the will of the company if they should decide that the man is "incapable," "business is slow," and for a hundred and more other reasons. The contract offers the employees no appeal and no opportunity of presenting his grievances and having them reviewed by any impartial committee.

It exacts certain promises from the employee. Almost universally he must agree to assign in advance to the company all his inventions, processes, patent rights, etc. Along with this there is usually a stipulation that, if he leaves the employ of the company, he will not work for a similar company for a period of many years.

In short, the employee sells himself, his technical skill, and in addition, all that he may be able to invent and develop through his own efforts—all for the right to a job at a sub-normal rate. In addition, he must agree to deny himself the right to secure other employment in the only field in which he is proficient so that the company shall be spared that competition.

Beyond this, the employee has no protection, no redress of grievances, no guarantee of continued employment, no recognition of improved work to be compensated by increase in pay, and is left entirely to the dictates of the company.

In a word, it is a beautiful one-sided proposition.

To overcome these abuses, and, in addition, the unsatisfactory conditions of pay, hours and tenure which prevail almost universally for all technical employees, Unionism is growing. The FA ECT, as the trade-union of technical employees, seeks through collective bargaining to remedy the existing situation and to establish fair and adequate working rates, hours, and conditions for the tens of thousands of technical employees throughout the country.

Trade union organization is directed towards winning a *union contract.* Such a contract is a written agreement between the Union and the company incorporating a definite understanding as to recognition, rates of pay, hours, seniority and many other important clauses.

In the "Handbook of Trade Union Methods" published by the Educational Department of the International Ladies Garments Workers Union, the following is printed as a summary of many years of relationship:

"No really satisfactory and stable relationship can be maintained between an employer and his workers, except on the basis of a written agreement which gives all of the agreed-upon terms in detail. Too many times in the history of the labor movement have strike gains been dissipated because the workers were pursuaded and intimidated upon relying upon the employers 'word of honor.' A written agreement, even if the terms of it are not all that the union should like, is a definite document with conditions and stipulations set down in black and white, subject to interpretation but not to denial."

What are the things that we seek in our FAECT union agreement?

The following indicate the more important points to be covered: 1. Recognition; machinery for adjusting grievances; 2. Rates of pay and provisions for increases; 3. Classifications and provisions for promotions and seniority protection; 4. Hours; sick leave; vacations; 5. Patent protection; 6. No discrimination; no interference with Union's right to organize; 7. Recognition of shop stewards; 8. Machinery for handling differences where the company and the Union cannot come to an immediate agreement.

In addition to these points, there are many others which may be of greater importance to a specific industry but are not characteristic of all.

Often the question of physical working conditions is very important, especially in industrial plants and even in drafting rooms where the physical facilities of space, light and office equipment are poor and harmful.

The first thing that a Union seeks to achieve is Recognition. There are three types of recognition clauses, namely:

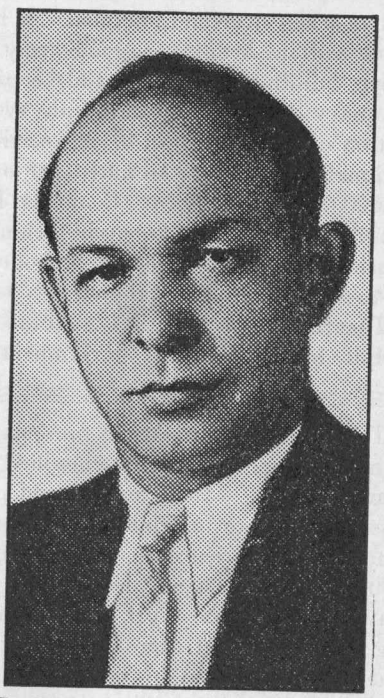
1. The closed shop.
2. Sole bargaining rights.
3. For members only.

The closed shop clause recognizes the Union as the bargaining agency for all employees in the plant or the particular department with a provision that no one is to work in that plant who is not a member of the union.

The sole collective bargaining clause usually states that the company recognizes the Union as the sole collective bargaining agency for all its employees. It differs from the closed shop however in that there is no stipulation that only Union members may be employed.

The other type, the clause providing for bargaining for members only, is the poorest type of recognition the Union can obtain.

In the April issue of TECHNICAL AMERICA we will discuss these various types of clauses more thoroughly. We will also discuss other basic points covered in contracts.



F. J. Michel, United Auto Worker International Board representative assigned to the FAECT drive in auto.

Engineers In Auto

C. L. ROBERTSON

IN the fall of 1932 it became apparent to engineers and draftsmen in the auto industry that competition between men for the few available jobs was rapidly effecting the downfall of any semblance of proper remuneration for services rendered. "Lay 'em off and hire 'em cheaper" was the order of the day. Contract work, competitive bidding on design work between employees of single employers was a common practice, with hungry men looking in through the windows, awaiting a chance to join in the bidding.

Self-defense, then as always, was the motive for the efforts toward organization, and in a few months a militant force had been formed which spoke loudly and firmly against the contract design evil. Die designers were first to take active part in this movement; tool designers, motor, chassis, and body designers and draftsmen were close behind. Almost immediate results were accomplished. Contract work became extinct, to be replaced by hourly rates and salaries, too low of course, but providing a basis for stability of earnings. Overtime work was recognized as vicious when perpetrated during periods of unemployment among men of the profession, and the newly formed Society was willing and anxious to insist upon full conformity to the provisions of the National Recovery Act, when that era arrived. The idea of spreading employment and reducing unemployment became a cardinal tenet of the Society of Designing Engineers henceforth.

The men of the profession realized, soon after the birth of the SDE, that this movement was much too meritorious for mere passing consideration. They set out to establish a constitutional foundation for permanence, and a financial structure for keeping the machinery in motion.

During the period from 1932 until well into 1936 the Society experienced few contacts except of its own making. Other organizations were busy building their own foundations and paid little heed to us. Our relations with the FAE CT were friendly and warmly fraternal, each being fully appreciative of the problems of our independent existence, and both wary of entangling alliances.

With the rapid growth of the UAWA, however, came a reawakening to many of us. We suddenly found ourselves surrounded by a surging, aggressive mass of determined auto-workers, bent on wresting their Constitutional rights from improper custody. It was not unnatural that many engineers should misunderstand this new giant's motives, nor was it odd that this misunderstanding should lead to mistrust between persons in the SDE and the UAWA. The very rapidity of the growth of the UAWA was too great for the comprehension of some of us who had been accustomed to an unorganized and docile shop personnel.

In attempting to steer the SDE in its habitual course we were sometimes rocked and jostled a bit by rollers from the greater ship, and this buffeting produced a sense of fretful discomfort among a number of our members. A change of course seems to be indicated for us, and our leaders are now seeking the support of our membership in a referendum to put our course in line with the new trend, in the smoother navigation of a course in the center of the great ship's wake.

As an independent professional society we have accomplished a considerable amount of good in behalf of the men of our profession. Through mutual contracts betwen ourselves we have regulated many conditions beyond our reach as individuals. We have placed financial support behind our members who are unwilling to accept employment at salaries below our ethical minimum standards. We have restored proper consideration for necessary overtime work, and have largely eliminated the former abundance of unnecessary extra work. We have sought and often gained wholesale concessions in salary increases. In fact, we have achieved an enviable record in all things but one—mutual understanding and recognition of our big brother, the shop union—and we are now looking toward joining hands with the FAECT in the accomplishment of that one.

(*See Editorial, Page* 11)

Rates At Allis-Chalmers

"How about publishing our classification, or others, with the idea in mind to get comments from the outside for their betterment?" writes one of the leaders of the Independent Engineers' and Draftsmen's Association of the Allis-Chalmers' West Allis, Wisconsin plant, to the Federation. We are publishing their rates below. We will publish any others sent in.

Tracer

Learns tracing by working in drafting room, doing incidental tracing and miscellaneous drafting room work. Salary monthly, Adult male $98. Minor male $93. Salary Hourly, Adule male 58½ cents. Minor male 55½ cents.

Detailer

Normally enters drafting room from apprenticeship, or by promotion from tracer, or from outside with equivalent ability or experience. Salary: monthly $120. Hourly 70c.

Draftsman B

Normally enters rating of draftsman by promotion from detailer or from outside with equivalent ability or experience. Salary: Monthly $150. Hourly 87c.

Draftsman A

Normally enters rating of Draftsman A by promotion from Draftsman B or from outside with equivalent general ability or experience. Salary: monthly $200. Hourly $1.16.

Designer B

Enters rating of designer by promotion from Draftsman A, or from outside with specific or equivalent general ability or experience. Salary. monthly $225. Hourly $1.30.

Designer A

Normally enters rating of designer A by promotion from Designer B, or by outside employment of one having specific or equivalent ability or experience. Salary: monthly $275. Hourly $1.59.

All rates given above are the minimums for each category.

Chemical Workers Convene

Noting Some Large Inroads Into An Unorganized Field

THE first biennial Convention of the Gas, By-Product Coke and Chemical Workers, District 50 of the United Mine Workers of America, held recently in Washington, D. C., was, as its President, James Nelson, pointed out, the coming of age of a national group ready to go forward towards the unionization of its industries.

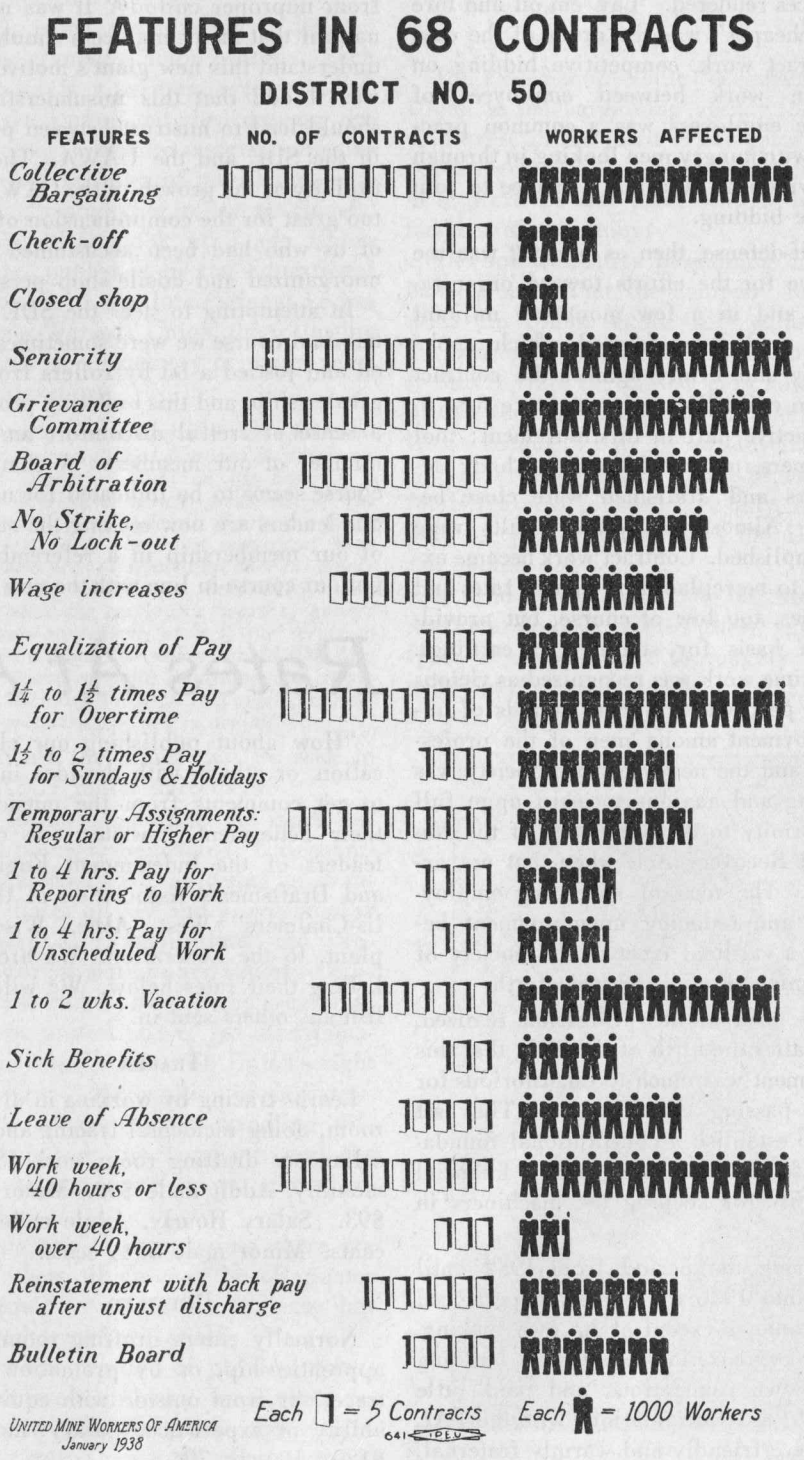
In his report to the Convention President Nelson traced the history of the development of trade unions in the gas and by-product and chemical industries, and pointed out the need for industrial unionism at this time. "In the face of a new depression," he said, "only a national organization can prevent our workers from being victimized as they were in 1932 and 1933. This is certain. This so-called recession will deepen into a worse depression than the one we have recently experienced. There will be a few hopeful upward surges, but the downward progress of our economy will not be halted. We must be organized, politically and economically, locally and nationally. We must be prepared for this new depression as we were not prepared in 1929. Then and only then will our voices be heard in the halls of Congress and our words be heeded."

He further stressed that:

"The chemical industry employs over 200,000 men and women. Its products are so important to the economic life of the nation that no major industry could function without them. The chemical industry is the reverse of the gas industry. It is constantly expanding as a result of the demands of industry and the continued research of chemists.

"Our surveys of the chemical industry show that chaos reigns in the realm of wage rates and working conditions. The large chemical plants pay fair wages and conditions approach the paternalism of the pre-depression gas utility industry. In the smaller processing plants conditions are unbelievable and wages are on a sweat-shop level."

Marcel Scherer, FAECT Organizational Director, addressing the convention, pointed out that "There has always been an unhealthy separation between the plant workers and the so-called technical workers. In the colleges, students are taught that the chemical owners are benefactors." Chemical manufacturers, he added, "kid them into believing that they are superior to the other workers. They delude them in this way, make them think they are part of the management . . . What is their reward? Low wages and insecurity."



Illustrating the features in the contracts won for workers by the Gas, By-Products Coke and Chemical Workers of the United Mine Workers of America.

Industrialization Of Housing

K. LONBERG-HOLM and C. THEODORE LARSON

IF THE aim in production is increasing productivity, then the production of any productive form is not complete until it is finally eliminated in favor of a new and better form. Such productivity is expressed in an increasing control of environmental forces for the benefit of man and society. The higher go the standards of environmental control, the greater become the rates of obsolescence in existing forms. The housing field, like other productive fields, is affected by such obsolescence. In light of what is technically possible and socially desirable, almost all existing forms of housing are already obsolete; sooner or later they should be replaced by better forms.

The production of new housing forms raises a problem which becomes increasingly complex with advancing standards of productivity. The first task is the rehousing of families now living below standards of minimum acceptability. As an emergency this could be met by the production of temporary shelters. Even with this task accomplished, there would still be the problem of continuously rehousing America in accord with advancing standards. On this basis the housing shortage is too great to be met economically by the traditional handicraft methods of production. Further development of industrial methods is implied if the problem is to be solved.

The increasing number of attempts to produce "prefabricated" houses is evidence of such new methods in the housing field. These enterprises are chiefly significant for their innovations in marketing. Distribution is stepped up geographically, becoming regional rather than local in scope. At the same time, for economy in production, there is a transfer of fabrication activities from the site to the shop (prefabrication). Rarely, however, is there any advance in the design of dwellings. Research is focused more on potential economies in marketing than on improvements in the product itself. Consequently the "prefabs" are much like other dwellings in both appearance and performance: they continue to be boxlike and restrictive in their forms.

Radically new and more desirable forms of housing are made possible with the introduction of synthetic materials and industrial techniques, but business enterprises hesitate to develop such forms because of the economic risks. Obsolete building codes are a restriction; various trade and craft monopolies are opposed to technical innovations; real estate and mortgage interests, fearful of jeopardizing their existing investments, exercise a boycott; consumers also resist forms that look unfamiliar. In this opposition is revealed a basic conflict: industrialization is speeding up a clash of economic forces that cuts through all lines of activity. Even with the most progressive individuals and organizations there are vested interests at stake. One side wants change, the other status quo.

Business itself is split apart. Some enterprises make profits by producing things while others make profits by merely owning them. Industrialization of the housing field is geared to these two forms of profit-making. For instance, an influx of new mass-produced dwellings would subtract so substantially from the desirability of existing dwellings that their market value might fall below their outstanding debt. Profit through production tends to speed up this process by maximum output of new forms. Profit through possession tends to slow down the process by minimum elimination of obsolete forms. If the obsolete forms of housing are not eliminated and continue in use, then the market soon becomes glutted and a break-down in housing production is the ultimate outcome.

A continuous development of new forms is possible only when no economic restrictions are placed on the elimination of obsolete forms. If housing is to be brought up to the par set by the most advanced standards of productivity in other fields, then there must be centralized production control in order to integrate all phases of production in the housing field. These phases can be analyzed according to a characteristic cycle of evolutionary change: (1) research, (2) design, (3) fabrication, (4) distribution, (5) use, (6) elimination. Each phase in this productive cycle is subject to planning control, for all are interrelated and interacting. The pace of industrial advance can be speeded up by planned elimination of obsolete forms and by planned research for new productive forms.

Industrial integration is also affecting such economic relationships as the traditional trades and professions. New relationships are emerging in line with the forces of industrialization. Technicians — artists, architects, engineers, chemists, physicists, and others — are affected both economically and technically by this process. On the economic front there is a shift from the status of professional free-lances to that of salaried employees of large industrial organizations. At the same time, on the technical front, there is an increasing specialization in production which is expressed in an increasing need for more specialized technical service. The technician thus becomes more and more important in the housing field as a specialist in production.

With the best possible control of environmental forces as the aim in production, the technical objective becomes the specialized development of best possible forms (what) to serve as specific means (how) for specific needs (why). Just as industrialization implies increasing specialization, so also does specialization imply a still greater degree of industrial integration. With increasing integration in production it becomes increasingly possible to design the best possible form for each productive activity. Thus the housing field tends to become more and more specialized in its range of productive forms, and the technician has a correspondingly greater choice of functional activities. The technician's own range of specialized performance can be analyzed according to his productive functions as researcher, designer, fabricator, distributor, user or eliminator of productive forms.

Increasing specialization in housing forms is expressed in an increasing range of operational systems (examples: circulation, structure, lighting, sanitation) designed specifically for an increasing range of specific activities. The integration of such systems into specific operational units (examples: unit kitchens, unit bathrooms) is expressed in

a variety of forms designed as separate self-contained units, easily transported and assembled wherever and whenever desired. The integration of such units, as they become available industrially in accord with varying rates of obsolescence, is expressed in the production of specific dwelling units designed for specific types of occupancy. With increasing integration of such forms, as expressed in an increasing range of specific housing types (examples: trailers, single-family and multi-family houses, hotels), the housing field tends to become infinite in its continually changing variety of forms.

The housing production problem thus goes beyond merely a quantity reproduction of conventional forms. Such forms have been developed within the limitations of natural materials and handicraft techniques; originally designed for different needs, they are handicapped in their range of performance. With a demand for lowest possible cost in production, there is a tendency in design to reduce these forms to a "standard minimum" cube. Such designs can be obtained only by further sacrifice in the requirements of use, and the logical outcome is the development of forms which represent standards of minimum acceptability (subsistence homesteads, minimum houses, and the like). In this process the technician also tends to eliminate himself out of economic importance by narrowing his own range of performance.

The design of any specific housing form is conditioned by the limitations imposed in other phases of production. With increasing specialization and increasing integration in production, these limitations are progressively eliminated and there is a correspondingly greater freedom in design. New research findings open up new possibilities. So do forms which become new means of fabrication (examples: new materials, new machinery) or new means of distribution (examples: new marketing systems, new transportation and communication systems). Likewise, forms designed to meet exacting requirements of use (examples: highly specialized building types, mobile units, precision controls) point the way to the design of new housing forms. The achievement of such potentialities in design depends on the integration of activities in an increasing number of productive fields.

With industrial integration there is an increasing degree of interaction between various productive forms. This is expressed in an increasing number and variety of relationships which must be considered in the design of any new housing form. Such production relationships can be analyzed according to various environmental forces: *physical* (examples: geosphere, atmosphere, atomic sphere); *biological* (examples: bacteria, plants, animals, man); *socio-economic* (examples: products, organizations, concepts). These variable and changeable forms of energy represent factors that are involved in all phases and all fields of production. Industrially, the problem is the most effective transformation of such forces into flow-patterns (productive forms) that will best conform to the continually changing requirements of use.

With an increasing number and variety of productive needs the problem of industrial integration becomes more and more complex. Consequently there is an increasing need for collective collaboration in production. This implies further development of organizations (industries) which integrate the activities of specialists in various phases and various fields of production. Just as various substances can be integrated into specific materials (exemplified by the process industries) and various materials into specific equipments (exemplified by the mechanical industries), so can various equipments be integrated into specific services (exemplified by the service industries). With more and more requirements of use the emphasis in the housing field shifts progressively to the production of specific housing services (examples: electric power, telephone service, laundry service, household protection).

The concept of housing as a system of services implies the specification of desirable standards of performance in the production of new housing forms. This involves the elimination of obsolete standards and research for new standards. Thus there is an increasing need for an educational service which will provide a continuous flow of specialized information on activities in various phases and various fields of production. With increasing specialization in production there is also an increasing need for the integration of such information. This in turn implies the development of an operational system of technical definitions (production index) which will correlate various environmental forces and various phases in the cycle of production.

With increasing control in production an increasing surplus of human energy is released from the destructive forces of an uncontrolled environment and becomes available for still greater degrees of control. The progressive elimination of environmental limitations makes possible an expansion of human activity and an acceleration of events. Technically, the issue is mobility versus immobility. Neighborhoods are no longer limited to walking or horse-back distances. City and country merge into productive networks that cut across political boundaries and physical obstructions. State lines no longer correspond to production flow lines. A new national flow-pattern of production is emerging in accord with new productive activities. Each new activity, like television, involves a new network that brings a closer social unity.

The extent of social integration is indicated by the increasingly worldwide development of production networks. The criterion of design becomes the integration of motion (control of space and time). Advances are measured in terms of increasing mobility (freedom in space) and increasing leisure (freedom in time). The control of varying rates of obsolescence in productive forms (space-time zoning) therefore becomes increasingly desirable. Technically, with all our physical, biological and socio-economic resources, this problem of industrial integration should be easy to solve. Economically, however, the difficulties appear more and more complex. Insecurity and unemployment—the negative aspects of increasing mobility and increasing leisure — are also intensified by industrialization.

How is more desirable housing to be produced if it cannot be paid for? Why produce better housing if more profits can be made in other lines of production? Questions like these take the housing problem entirely out of the technical sphere and entirely into the economic and political. There it falls outside the scope of this paper. It can be observed, however, that integration in the technical sphere presupposes a similar integration in the economic sphere, which is expressed in the growth of monopoly control in production. Thus the housing problem is swallowed up by the larger task of designing a society that can utilize all its productive resources for the benefit of man and society as evolving forms of production.

SDE Affiliation— A Move Forward

THE drive for the affiliation of the SDE with the FAECT finds widespread support. Speakers of the FAECT and the industrial union have found the membership of the SDE keenly interested in affiliation, asking questions which indicate a thorough study of the relationships involved. Special bulletins have been distributed discussing the many questions raised which center principally around that of the organizational position of the SDE members after affiliation, and also the manner in which their affairs will be coordinated with the plant locals of the industrial union.

It is obvious that there are two basic considerations for affiliation. First, there is the need of closer relationships with the industrial union. This becomes especially vital at this time when the large auto manufacturers have laid off 25%, 50% and 75% of their employees, technical men included, and are attempting to lower the rates established for designers and draftsmen after many years of intense and successful work by the SDE.

The technical man finds that he has no job security. He finds also that he is not protected by seniority of any kind, since in the past he has changed from one position to another in order to secure higher pay. These problems are also problems confronting plant workers, but they are showing that in their organization, a unit of the CIO, they have the leadership and vitality to defend their gains and protect their members. Therefore, affiliation of the SDE with the FAECT, which will ensure joint activity and mutual help of two CIO Unions, is sought.

The second basic factor is the question of developing a national organization—national not only in auto, but for the whole engineering field. The history of independent organization is a sad one. Many independent unions have done excellent work and have even swept certain fields only to disintegrate after a period of time. The highly skilled craftsmen in auto recall that this was exactly the experience and fate of their M.E.S.A.

A national organization is, therefore, making a greater appeal to the SDE members. It means that employers will not be able to recruit men at lower rates from other cities, because the FA ECT will be organized in these cities also. It means, also, that the company cannot use, as a means of cutting wages, the argument that lower rates prevail in the machine-tool field or in other industries where large numbers of mechanical engineers are employed.

But national organization means more than that. A trade union that amounts to anything can no longer speak of its work as merely the simple trade union question of hours and pay in a specific plant. There are bigger problems which fundamentally affect every employee. These problems no one union can solve. There is the question of millions of unemployed. There is the example of the Wages and Hours Bill. There are many other problems of social and labor legislation. To cope with these problems a powerful and progressive labor movement is needed. Here the efforts of each union will be effective in the sum total of the work and strength of all.

A powerful national trade union of engineers and technical employees embracing all of the existing independent unions and going further, by organizing the unorganized, will be of greater value in terms of dollars and cents, working conditions, and job security, than the most powerful union of auto designers and engineers.

Affiliation is the first step in the campaign. It will be followed by an intense organizational drive to completely unionize the automotive field, machine-tool, farm equipment and aviation. All the resources and organizational strength of the FAECT will be dedicated to this important task. The industrial union will give its support and as usual, the CIO will be on the job with its indispensable aid.

This is what affiliation means for the SDE members.

Profits vs. Plenty

The following editorial was prepared by Dr. Walter N. Polakov after he read the manuscript on industrializing the housing field by C. Theodore Larson and K. Lonberg-Holm, appearing in this issue. Dr. Polakov points out what the objectives of technicians in society are today, and shows that they apply to all technicians.

A SCORE of years ago the foremost American engineer, Henry L. Gantt, asked a question: Why did our campaign for efficiency which was earnestly waged for many years fail so miserably to produce plenty for all? His straightforward answer was that the object of industry was to harvest dollars, not to produce goods, and if more dollars could be havested by producing fewer goods, they produced the fewer goods. Since then this sinister truth has become convincingly evident and even captains of finance and industry were bold enough to admit it at various Congressional investigations.

The engineer of today whose motto is "What is not yet, may be" and whose years of training and professional pride are to provide plenty with minimum effort and to create secure leisure for the advancement of mankind has come to the parting of the ways. It is either to see the frustration of his work, the defilement of his ideal and to play the game of restricting production so that scarcity will bring high profits to few and dismal unemployment to many; *or* to ally himself as a wage worker with the mass of organized workers whose aim essentially is to advance technology to secure decent living and assure progress and freedom.

Herein lies the identity of the ultimate objectives of a scientist, of a technician, of an engineer with any other worker, and the unity of objectives is incompatible with diverging means.

Whether we realize clearly or merely intuitively grasp that we are no longer living in the Machine Age where the brain worker was laying plans and the brawn worker was carrying them out, we entered, at least a quarter of a century ago, into the Power Age where the distinction between the man with the white collar and the man in overalls is obliterated. With the advent of the automatic factory and with rapid spread of mass-production industries, today there is no longer a choice between professional isolation on one side and united front of industrial unionism on the other. The scientist and technician are again at the parting of the ways: either the dignified rottenness of individual subservience or alliance with the working masses for immediate security and realization of potential plenty.

FEDERATION ACTIVITIES

Pittsburgh

New locals, an influx of city engineers, and demands of contacts and plants for organization have resulted in appeals to the national office by the chapter for assistance. Phil Salaf, Philadelphia organizer, has been transferred to this area for a temporary period to assist Pittsburgh Organizer Jacoby. Bro. Jacoby reports rapid strides in the steel and electrical fields and in city and county offices.

A draft agreement has been prepared for the Carnegie-Illinois men by the Local. Negotiations are expected to start shortly there and at the Bethlehem plant to Rankin. The SWOC at American Bridge in Ambridge is actively supporting the FAECT local in the plant. It has issued a letter urging the technical employees to avail themselves of the benefits of organization in cooperation with the industrial union. The letter suggests a union label on all drawings in the plant.

The school for city employees in preparation for examinations has met with enthusiastic response. A class for active members in organizational principles has also been organized.

Cincinnati

Chicago Organizer Frank Kornacker is taking charge of the negotiations between the Globe-Wernicke Local of the FAECT and the management. He is also helping to get an organizing drive under way. A signed contract for technical employees is expected.

Kornacker reports the setting up of an organizing committee to carry out a drive for the other white collar employees in Globe-Wernicke, and other plants in the area. There are excellent prospects for bringing in approximately 300 technical employees.

Berkeley

Negotiations with the El Dorado Oil Co. have started. A 40 hour week and recognition of the FAECT have already been granted. The management has offered a counter proposal on salary scales. Further conferences are scheduled, the agreement to be retroactive to January 15. The Warehousemen's Union and the Machinists Union are both lending support and cooperation in the negotiations.

Denver

A group of 75 men are interested in forming a chapter in Denver. They have held several meetings and have requested additional literature and material. We may soon be able to charter a local in the State Highway Dept. The conditions of work there are very unsatisfactory. Our Minnesota Highway chapter has been requested to give all possible assistance and information.

Boston

A campaign for prevailing rates on WPA was initiated with a mass meeting with International Pres. Berne the main speaker. During his visit to Boston, he also addressed the Joint Council of the Engineering Societies of New England. He was very well received, and was invited to speak to the body whenever we feel the problems of the professions should receive their attention. He was further assured of their serious consideration of any appeal for united action on specific issues.

Bros. Berne and Smith met with some of the officials of the Navy Yard Local of the IFTEADU, AFL, and outlined to them the FAECT program and our drive in the Federal Civil Service and the navy yards.

The officers of the UER & MW local of Allis-Chalmers met with the Chapter Executive Board and Bro. Berne, to clarify the relationship between the two unions there. An understanding was reached which promises to insure the complete organization of the Allis-Chalmers technical men into the FAECT. A large percentage of the men have already signed up. It is expected that the new contract to be negotiated shortly, will contain provisions for the technical men to be represented by the FAECT.

An AFL group of Dental Technicians are considering the question of FAECT affiliation. A membership meeting will take action shortly.

Milwaukee

The Independent Engineers & Draftsmen's Association was recently certified as the bargaining agent for technical men at the West Allis plant of Allis-Chalmers. The technical men, choosing between the United Automobile Workers and the IEDA, voted for the latter. Prior to the election, our Midwest Regional Vice-President Johnson met with the men. They indicated that they would take up the question of FAECT affiliation immediately after the elections.

National Organizational Director Scherer has since met with the officers. They requested literature and are arranging a meeting with representatives of the Federation before their next Executive Meeting in March when action on the proposed affiliation will be taken.

Philadelphia

The new Navy Yard Chapter is becoming a real force and is busily engaged achieving the goal of 100% organization. The Dental Technicians Chapter 102 has won its first closed shop contract at the New Equity Laboratory. It calls for closed shop, 40 hour week, and a 10% wage increase.

New York

Chapter 31, Industrial Chapter: An energetic drive to extend organization is the answer of this chapter to the challenge of the recession. A series of meetings of FAECT men in 40 offices is being held. Seven such meetings were held the first week. A post card campaign for the McCaffrey Bill, providing for prevailing wages to technical personnel on public works, has met with enthusiastic response. Replies from a number of state assemblymen endorsing our Bill have been received.

Chapter 32, WPA: The chapter has been deluged by appeals for information on proceedure in obtaining WPA

jobs from men who lost their private industry jobs. We have been successful in placing many of them, but the available jobs are woefully inadequate. The chapter is active in the work of the Trade Union Committee On WPA and Unemployment, which includes the CIO and AFL unions in the city as well as the Workers Alliance. More than one third of the technical men on WPA have already signed petitions supporting the chapter's prevailing wage campaign. Committees are at work drawing up briefs which will be submitted to the Administration locally and in Washington. Another brief outlining the reactionary anti-union policies of N. Y. WPA Administrator Somerville is in preparation.

A skit presented by members, official presentation of charter, and an address by our International President Berne will be the features at the next membership meeting.

St. Paul

The Highway Engineers chapter is engaged in efforts to institute seniority as well as a campaign to put through automatic increases promised last year. A CIO committee, with General Secretary Stuart Green and William Forschler of the FAECT, interviewed Governor Benson on important problems of the Highway Department. Brother Forschler was elected a Vice-President of the State CIO Industrial Council at its recent convention. At its last membership meeting, the chapter went on record enthusiastically endorsing Governor Benson for re-election on the Farmer-Labor ticket. The importance of supporting Benson was stressed in view of his liberal pro-labor record.

Chicago

In conferences held with the NLRB we learn that the case against the Universal Oil Products has been accepted by the NLRB for trial. This means that the preliminary investigations indicate that the company has violated the law.

The chapter has also started a survey and registration of unemployed technical men which will be incorporated in a brief to be presented to the WPA Administration as part of the campaign for more jobs and additional projects.

Detroit

The first joint activity of the SDE and the FAECT, has been the setting up of a special committee on unemployment and WPA. Numerous replies were received to ads and press releases which called upon the unemployed to register.

Following a very successful meeting of a large group of unemployed, a special committee was set up consisting of three from the FAECT, three from the SDE and three non-members, as yet, of either union.

This committee has also become part of the White-Collar Unemployment Council of the city of Detroit, which is working together with the Auto Workers Union to increase relief and to secure employment for tens of thousands on WPA projects.

Cleveland

The revival of activity in the Cleveland chapter has followed a recent visit of National Organizer Joseph S. Jacoby. A joint committee has been set up with the Cleveland Chapter of the SDE to formulate projects to take care of the large numbers of unemployed technical men and women.

The Right To Work

In every major city throughout the nation, the employed and unemployed are acting against the threats of unemployment. That these threats are real can be vividly pictured from the census report of 12,000,000 unemployed as a conservative estimate. More recent reports show that as many as 3,000,000 have been dismissed in the past few months.

The following figures show how definitely the technical employees have been affected:

Detroit Plants	*No. Discharged*	*% Discharged*
Murray Body	10	100%
R. C. Mahone	95	76
Briggs	21	84
G.M. (Gear & Axile	25	50
U. S. Tire	100	100
Chicago		
Carnegie-Illinois (South & Gary Works	75	
Link Belt	25	
Bearsley & Piper	45	
New York		
Gibbs & Hill	250	90
Combustion Engineering	200	70
Electric Bond & Share	75	40
Cadigan & Hyland	80	50

The President concluded his January message to Congress with the statement "I do not propose to let the people down." Today, faced with the real menace of unemployment, the people themselves are on the march to guarantee that statement that both the President and Congress does not let the people down.

Outstanding in the campaign for the unemployed has been the efforts of the CIO in getting Congress to repeal the Woodrum Amendement and to pass the Schwellenbach-Allen Resolution. The passage of the S-A Resolution would make possible the employment of every employable unemployed person willing to and wanting work. The CIO has also heartily supported the efforts of the Workers Alliance in the same direction, and urges its unions to work in close cooperation with it. A number of CIO unions have already passed resolutions in support of the S-A resolution, notably the United Mine Workers of America. A circular has also been sent out to all CIO unions over the signature of John L. Lewis urging all affiliates to take immediate action in support of the unemployed.

On Education

A TENDENCY noticeable among large sections of our membership and unorganized colleagues is a reluctance to discuss political questions seriously. There are dozens of political questions that affect us all; they are no more than mentioned when the unthinking becoming annoyed, bored, or, if vicious, raise the "red-scare." Not to discuss, not to question is not to know or learn.

We expect all chapters to have received by this time a short paper from this department on peace or fascism. Properly organized discussions should bring a flock of letters to this department and to TECHNICAL AMERICA. We still expect more response to our first paper on the economic recession. If we receive some worthy response, this department promises to cajole the editors to release some space for it.

Covering The Labor Front

GE Signs Contract

THE General Electric Company and the United Electrical, Radio and Machine Workers announced the terms of a national agreement which had been decided upon after two weeks of negotiation. The contract is now before the Union's affiliated General Electric Locals for their consideration, and will become effective as soon as ratified by them.

Negotiations were conducted most amicably, and in the same spirit that has characterized the relationship between the Company and the Union in all of the plants where the Union has members.

The agreement provides recognition for the Union as the sole collective bargaining agent for those plants where the Union through a National Labor Relations Board election, or certification, or other appropriate means satisfactory to both parties has been designed, or shall in the future be designated as the sole collective bargaining agents.

The General Electric booklet on company policies concerning wages and working conditions, known as GEQ 105A, was also incorporated in the agreement. The contract will contine for one year with provisions for yearly renewal. Other provisions cover procedure for adjusting disputes, the use of an impartial umpire, the outlawing of company unions, and the use of company bulletin boards by the Union.

Unemployment Protest

In Detroit, in response to a call by the CIO and the United Auto Workers for a protest against mass unemployment in the auto industry, more than 200,000 persons thronged into Cadillac Square. The more than quarter-mile distance from the County Building to the City Hall was packed solidly with men and women whose organized strength has obviously strengthened rather than weakened since mass layoffs made 300,000 jobless.

With deafening roars the meeting adopted resolutions for a fifty per cent reduction in rents, a city investigation of rent profiteering and a citywide rent strike if no action materializes; for adequate relief to single men and women and an end to flop houses; for immediate passage of the Schwellenbach-Allen resolution.

In a formal message Governor Murphy told the meeting:

"I am having every resource of the state government made available to assist local governments. If it appears from surveys now being made that available means are inadequate I shall not hesitate to call the legislature into special session to provide additional funds."

UMW Convention

Important, too, was the convention of the United Mine Workers which opened the month's labor activity.

The convention struck out against reaction at home and abroad when it adopted resolutions denouncing "the continued aggressive actions on the part of the fascist nations of the world such as Germany, Italy and Japan," and urging the building of Labor's Non-Partisan League and the creation of a broad progressive political movement of workers, farmers and liberal groups.

The convention adopted many important resolutions, including:

A resolution calling for a five-billion dollar Federal housing program to be financed with social security funds.

A call for a Federal survey of the so-called technological unemployment and the establishment of a six-hour day, 30-hour week without reduction in pay.

A resolution opposing the Sheppard-Hill Bill, which would abolish the right to strike and establish a virtual military dictatorship in war-time.

Condemnation of the slanderous propaganda campaign against American seamen and of the legislative proposals designed to hamstring the National Maritime Union.

A demand for the immediate pardon and release of Tom Mooney and Warren K. Billings.

Senator Joseph F. Guffey of Pennsylvania, addressing the convention, said:

"Political citizenship, my friends, without economic citizenship, is a fraud and a delusion. It is an empty title; a silk hat without the price of a meal in your purse.

"The right to vote is valueless, unless it gives you as well the right to demand and receive for your work a fair share of the profits of industry.

Anti-Hague Show

Jersey citizens enjoyed the best entertainment of the Broadway season at a giant anti-Hague show held at the Mosque Theatre in Newark under the auspices of the CIO.

"Pins and Needles" and "The Cradle Will Rock," two sensational hits, were among the eight entertainment units on the program.

The show was sponsored by 45 prominent congressmen, educators, business and professional men and women, and the funds derived will be used by the CIO to combat Mayor "I am the Law" Hague in the Jersey dictator's own Hudson County.

Sales Tax Fight

The people of Philadelphia have learned how to express their demand for economic citizenship in a really democratic manner.

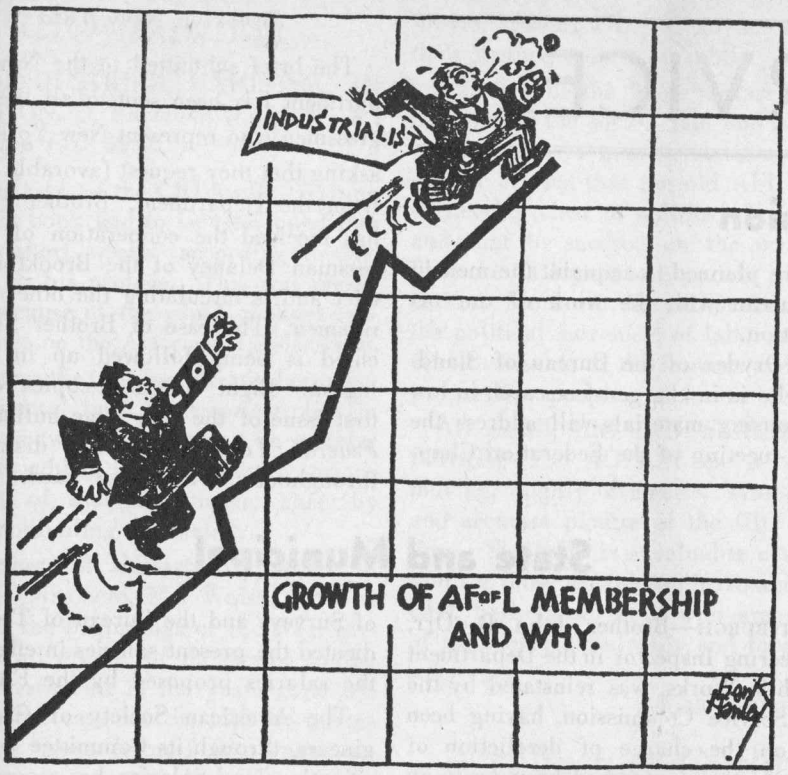
Three thousand Philadelphians protested, at a mass meeting held in the Academy of Music, against a 2 per cent sales tax already passed by the City Council and vetoed by the Mayor. The meeting added strength to the picket lines which have been parading before the homes of the councilmen who disregarded the wishes of the people by voting to "tax those least able to pay."

Leaders of the AFL and CIO addressed the meeting. William Curry, president of the CIO Council, rising to speak, said, "AFL and CIO are united against this holdup tax."

The following day the City Council decided not to over-ride the Mayor's veto and dropped the tax.

WPA Parade

Undaunted by a driving cold rain, more than 15,000 trade unionists from New York's AFL and CIO unions marched through Wall Street. Wearing raincoats, armed with umbrellas and carrying hundreds of banners and signs, the marchers made Liberty League Canyon echo and re-echo with shouts of "Put America Back to Work" and "Tax



From *Advance*

the Sixty Families!"

The parade was held under the auspices of the Trade Union Committee on Unemployment and WPA, composed of representatives of 52 AFL and CIO unions, the Workers Alliance and a number of liberal groups.

Massing in Foley Square, the marchers heard Congressman Emanuel Celler, speaking in the driving rain, promise to circulate a petition among his fellow congressmen calling for passage of the Schwellenbach bill.

Other speakers, representing the Cafeteria Workers, AFL; the United Electrical, Radio and Machine Workers, CIO; the Painters Brotherhood Council, 9, AFL; the Workers Alliance and others, called for 100,000 additional WPA jobs for the city, immediate increase in the city relief budget by 40 per cent, and the passing by Congress of a $600,000 WPA deficiency appropriation.

Civil Liberties

Labor's Non-Partisan League and Labor's Anti-Injunction League of New Jersey are leading a sharp fight against Senator Arthur F. Foran's bill to incorporate unions and send strikers to prison for two years. The bill has first place on Boss Frank Hague's program for New Jersey anti-labor legislation.

The Anti-Injunction League, representing 120 AFL and CIO unions, and the Non-Partisan League, have prepared an anti-injunction bill which is stronger than the bill Hague killed two years ago.

Foran's bill provides that all union elections must be held on company property and that a majority of all plant employees, including foremen, must support a strike before it can be called. State and local government workers are forbidden to belong to unions including other workers. Sympathy, sit-down and "slow-down" strikes are forbidden, and workers taking part in such strikes are liable to imprisonment for two years. The bill has many other anti-union and anti-labor clauses.

Chairman Carl Holderman of the Non-Partisan League has demanded public hearings on the bill and State Senator Walter Gardner of Passaic County, a great textile and machinery center, has promised to work for such hearings when the bill comes to the floor of the Senate.

SWOC Contract

In the big news of the past month was the renewal of the 1937 contract between the United States Steel Corporation and the Steel Workers Organizing Committee.

The renewed contract maintains the $5 minimum daily wage, five-day, forty hour week, a grievance machinery and recognition of the SWOC, and covers directly 240,000 employes of the Carnegie-Illinois Steel Corporation and four of that giant's subsidiaries, American Steel and Wire, National Tube, Tennessee Coal, Iron and Railroad and Columbia Steel.

Phillip Murray, chairman of the SWOC, commenting on the agreement, said that "while we hail the signing of agreements as a victory for labor, we likewise look upon these new contracts as a victory for America, because of the stabilizing effect they will have on business, particularly in the steel industry."

The conclusion of the agreement with U. S. Steel will put an end to the wail of Tom Girdler that the SWOC is "irresponsible" and will aid the steel union in the organization of the unorganized plants and in driving the fear of the companies out of many of the men in these plants.

Labor throughout the United States will be helped immeasurably by the conclusion of this most important wage contract.

CIO Chooses FAECT

Indicative of the leadership of the Federation in the housing field, the CIO regional director in New York has appointed William Rodriquez the chairman of the Housing Committee of Local 31 to represent the New York Regional Office on housing. The letter of Allan S. Haywood, CIO Regional Director follows:

Mr. William Rodriquez
Federation of Architects and Engineers
114 East 16th St.
New York, N. Y.

Dear Sir and Brother:

This will authorize you to represent the New York Regional Office of the CIO on questions of housing. You are empowered to work with committees from CIO unions and promote in every way possible a proper housing program here in New York.

At a later date we will assemble the various unions and create a permanent committee. I suggest that you collect all the data you can on this subject to present to the committee that will be called.

Fraternally yours,

ALLAN S. HAYWOOD,
Regional Director

CIVIL SERVICE

Federal Division

DISSATISFACTION with the existing AFL organization is indicated in a letter sent to our Division headquarters. The letter reads as follows:

"On behalf of a group of draftsmen employed at the Norfolk Navy Yard who are dissatisfied with the present AFL Representation, I would appreciate information and advice on the organization of a FAECT Chapter here."

Philadelphia Yard

Philadelphia is holding a joint meeting with the UFWA and the IUMSWA to discuss "Legislation for Federal Employees". President Green of the IUM SWA, Secretary Treasurer Eleanor Nelson of the UFWA, and Brother Fischer of the FAECT will address the meeting. At the last meeting of the Chapter temporary officers were elected and plans formulated for further organization in the Yard.

Washington Chapter

The Navy Yard Local held the center of attention in Washington this month. After many months of effort an excellent start has been made in the organization of the 350 men in the Ordinance Drafting room. The Local already organized 100% in the Model Basin has doubled its membership this last month by establishing a strong foothold among the draftsmen in Ordinance. The new men have many grievances, underclassification, low pay, few increases over long periods—all the inevitable consequence of lack of organization. To further the organization of all the workers in the Yard the Federation, together with the UFWA has set up the N.Y.O.C., the Navy Yard Organizing Committee, to organize the 2,000 unorganized men in the Yard of whom, 450 are technical men.

Reflecting the activity of the Local in the Navy Yard, the Navy Department Local is endeavoring to draw in all the Bureaus into the Federation. A large group in C&R have signified their intention of working to sign up a majority of the Bureau into the Federation and have made material progress in accomplishing this result. A series of meetings are planned to acquaint the men in the Bureau with the work of our organization.

Dr. Dryden of the Bureau of Standards who is in charge of research in low cost housing materials will address the March meeting of the Federation Chapter.

Brooklyn Navy Yard

The brief submitted to the Navy Department has been sent to all the Congressmen who represent New York City, asking that they request favorable action from the Department. Brother Fischer has received the cooperation of Congressman Delaney of the Brooklyn District and is circulating the other Congressmen. The case of Brother Sassenschied is being followed up in Washington. Eight hundred copies of the first issue of the four page bulletin the *Federal Technician* were distributed throughout the Brooklyn Yard.

State and Municipal

PITTSBURGH—Brother John B. Orr, Engineering Inspector in the Department of Public Works, was reinstated by the Civil Service Commission, having been fired on the charge of dereliction of duty. A strong case had been built up against Brother Orr, and technical men here were pessimistic about his reinstatement. Hearings, at which the FAE CT was represented regularly, lasted for three weeks, but the fight was won through our campaign. This is our second victory with the Civil Service Commission.

Having organized technical men in both city and county fairly well, attention is now turned to organization in the State Highway Department. The WPA section has again come to life, and is meeting regularly. Private industry has seen a definite upsurge in men working in steel and electric. Preparations are in progress for negotiations with some of the large steel companies.

FAECT has submitted a County Brief to the County Commissioners. A hearing has been granted. Wage proposals covering technical personnel have been submitted with only one object in mind, to achieve a wage scale commensurate with the responsibilities of the technical man and recognition of his worth as at least being equal to that of the skilled tradesman whose job usually pays more and requires far less formal schooling and experience.

Classifications comparing the monthly salaries of technicians in Allegheny County with those in New York County, N. Y., Cook County, Chicago, and Seattle were submitted in the brief. Other classifications prepared for the Division of Surveys and the Bureau of Tests, indicated the present salaries in effect and the salaries proposed by the FAECT.

The American Society of Civil Engineers, through its Committee on Classifications and Salaries, has recommended rates far in excess of those now paid by the County of Allegheny.

NEW YORK CITY—The problem of reclassifying New York City's engineering employees is nearing completion. The New York Civil Service Chapter No. 23, has been a leader in the campaign to secure a fair reclassification system. When the matter came up almost two years ago and it was apparent that an inequitable reclassification would result, the Federation waged a vigorous campaign which resulted in the defeat of the proposals. At the time the Federation proposed that the employee representatives be permitted to participate in the deliberations. When efforts to reclassify the employees were renewed last year the Municipal Civil Service Commission designated a Sub-Committee on Engineers Reclassification. A. L. Judwin, President of the New York Civil Service Chapter was chosen as a member of the committee. He was extremely active in the work of the committee and is at present a member of the committee engaged in drafting the final resolutions which will constitute the basis of the reclassification plan.

The new schedule will have three grades as outlined below:

Grade 1, Engineering Assistant, Architectural Assistant, $2,160 minimum, up to $3,119; Grade 2, Assistant Engineer, Assistant Architect, $3,120 up to $4,119; Grade 3, Engineer, Architect, $4,260 up to $6,500.

CIO In Action

C.I.O.-INDUSTRIAL UNIONISM IN ACTION. *J. Raymond Walsh W. W. Norton Co.* $2.50.

TYPICAL of the CIO itself, "Writing this book had to be telescoped into a few short weeks" according to Mr. Walsh in his preface. This was necessary because of the rapid changes taking place on the American Labor Scene.

Because the CIO has already become a fundamental part of American life in less than two years, we can be grateful that the subject is handled by a serious student of economics rather than by some pot-boiling journalist.

Starting off dramatically with the Chicago Massacre, Mr. Walsh takes us back to the beginnings of the AFL giving it full credit for its service to the labor movement in the years gone by. Stating the case for the CIO he quotes William Green himself who made an excellent defense of industrial unionism in 1917. Throughout the whole discussion of the formation of the CIO and the CIO-AFL controversy there is no direct criticism of the craft leadership although direct quotations from both sides show clearly that that is where the fault lies. The key point, which is not sufficiently emphasized, is that without industrial unions there can be no unity in the labor movement, because there is no unity between the unorganized mass production workers—the majority—and the organized craft workers—the minority.

Having laid the groundwork for the CIO, its drives in the various fields are reported in a manner to give the reader the full force and sweep of the drives themselves.

As an economist, the author argues effectively to show that through unionization not only is the country as a whole benefitted by increased purchasing power, not only is a highly competitive industry stabilized, but in addition the shock of capitalist crisis is lessened and a more equitable distribution of national wealth is brought about.

For us as technical workers we might take to heart what is said about white-collar people: "Classified by the basic socio-economic test — the relation of production to ownership — this new 'middle class' is not *middle* class at all but essentially a wage-earning, propertyless group."

A careful study of the chapter on employers' tactics will arm anyone against their methods, open or subtle.

Throughout the book we are shown the role of the local, state and Federal governments in many situations. It is clearly evident that the old AFL policy of steering clear of politics (?) is fatal and that to succeed on the economic field the CIO must take part in political action. Moreover, the author shows that the political movement of labor must be allied with that of the farmers and other progressive people.

All in all, CIO INDUSTRIAL UNIONISM IN ACTION is a swiftly moving, highly dramatic, sympathetic and accurate picture of the CIO in action. The book is a valuable contribution for those who would learn about the CIO, both those of us who are a part of the movement already and those outside.

MAX GOLDFRANK

Architecture Outline

AN OUTLINE OF ARCHITECTURAL HISTORY. *Thomas H. Creighton. Federation Cooperative Store, 114 East 16th St., N. Y. C.* $.50.

IN presenting this outline of the History of Architecture, the Federation School feels that it is providing in the most convenient form a review of all the essential facts necessary for an understanding of the development of architectural design and construction.

Primarily the outline is intended as an aid in the review of architectural history for examinations such as those for a State license as Registered Architect. With this in mind there has been an attempt to make it comprehensive, and yet to keep it sufficiently concise so that relationships of periods and their development one into another are obvious at a glance. Used for this purpose, it is more convenient and more complete than the ordinary school outline.

However, we believe that it can be used further as a mere skeleton of facts on which to form an understanding of the true stuff of architecture. At the beginning of each stage there is an indication of what the social, economic and technological background of each architecture was—a mere hint at the proper way to understand and study architectural history.

That way is to keep in mind, always, that each development in architecture has been the *modern* of its time. Only by remembering that fact can any building or "style" be properly appraised and assigned to its correct place in the history of building. What tools were at hand, and what social forces helped or hindered in their use? These are the things that explain the difference between Egyptian, Greek and Gothic architecture and make their progression clear—not inter-columniation or the number of modules in an entablature.

If we regard architecture as the orderly arrangement of forms and functions, conditioned by technological development and social progress, its history becomes a vital and interesting thing—the history of modern architecture. And only in this way is it possible to appraise properly our current modern movement—as an expression of available technics in relation to society.

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The Cornerstone

SIMON BREINES

THE prospects for new construction, and consequently, for employment opportunities for manual and technical workers in the building field, are obscure and uneven. In New York City, for example, 1938 will probably be a record building year. In addition to a relatively great municipal construction schedule, many large private projects are contemplated, notably the two final skyscrapers in the Radio City group. But the greatest factor, of course, is the $150,000,000 World's Fair which New York must get ready by the beginning of 1939. The Fair has served to stimulate a good many housing and multi-family apartment developments in the neighborhood of Flushing Meadows which will become a 1,200 acre park when the exhibits are removed.

In other parts of the country the outlook is not so bright. Much hope has been placed in the new F.H.A. amendment which the President has just signed. This law is not to be confused with an earlier one setting up the U. S. Housing Authority (see The Cornerstone for February). Will the new law result in the $16,000,000,000 program suggested by President Roosevelt, or are we to witness another one of those housing fiascos which produce little more than ballyhoo? The answer lies between the two questions, but probably nearer the negative side. One of the major factors is that the banks and mortgage companies who are loaded down with houses which they have taken over in foreclosure are becoming worried at the idea of so much new construction. The new homes would make their holdings even more worthless. The result is that a great deal of sabotage of the President's program is to be expected from this quarter.

For this reason and for others which we shall take up later, the optimistic housing statement carried in the newspapers must be discounted considerably.

Tenants are starting to move into Hill Creek, the Government's $2,100,000 low-rent housing project in Philadelphia on March 1. Rentals will average $7.25 per room per month, including heat, electricity, etc. There are 38 buildings containing 999 rooms in 1 and 2 story houses and 2 story flats. The buildings occupy only 12% of the 24 acre site.

Philadelphia has had earmarked an additional 12 million dollars for three more projects. Under this, the Government lends 90% of the capital cost and makes annual contributions to assure rents at levels within the reach of lowest income families.

WITH OUR WOMEN

REFERRING to the proposed Equal Rights Amendment to the Constitution, a headline appeared in a recent issue of the *People's Press* stating "Women in Industry Seen as Losers Under Proposed Amendment."

The amendment reads as follows: "Men and women shall have equal rights throughout the United States and every place subject to its jurisdiction."

Upon first glance, such an amendment appears harmless—giving equality to women. However, after careful scrutiny, it becomes evident that greater discrimination would follow its enactment. It would jeopardize beneficial laws already in effect, particularly those establishing higher standards for women in industry, and in the home.

The Women's Party, backed by corporate interests (who would have much to gain through passage of the amendment) was one of the few organizations expressing support. On the other hand, such progressive groups as the Women's Trade Union League, National League of Women Voters, National Council of Catholic Women, representing 2,000,000 Catholic Women, and many others, expressed opposition at public hearings before the Senate Judiciary Committee.

The decision reached a tie-vote of 8-8, and hearings will be re-opened shortly. Individuals and organizations are asked to wire or send letters to Henry F. Ashurst, Chairman, Senate Judiciary Committee, Senate Office Bldg., Washington, D. C., and to Senator Borah urging that the amendment be reported out unfavorably. This will be a step in the direction of reaching genuine equality.

Legislative Department

APPEARING before the Senate Committee on Retirement, Brother Milton Fischer, FAECT Legislative Representative, presented the Federation endorsement of the Neely Bill which cuts the retirement age for technical men in the Government employ from 68 to 64 years. This is a step towards the liberalization of the Retirement Act. Brother Fischer pointed out, however, that the Federation asks for a thirty year optional retirement provision in the law.

The Federation also went on record for the enactment of legislation that would provide retirement benefits for the workers in the temporary agencies who are at present deprived of the benefits of both the Social Security and Retirement acts.

The Federal CIO bills presented below, together with the Federal Appeals bill and the Federal 5-day Week Bill, round out the immediate program of the FAECT for Federal Civil Service.

HR 9157, the Federal Workers' Overtime Act, introduced by Representative Randolph of West Virginia, provides for a standard workday of seven hours for most office and clerical workers, and of eight hours for such groups as hospital attendants, marine workers and others on jobs that must be performed continuously. Overtime is to be compensated for at the rate of time and one-half in extra pay or leave.

HR 9158, the Federal Workers' Minimum Wage Act of 1938, also introduced by Representative Randolph, is designed to raise the lowest government salaries to $1,200.

The Federation opposes President Roosevelt's proposed cut in Federal highway appropriations. Our Legislative Representative has met with Congressman Bernard of Minnesota and obtained assurances from him that all the representatives from that state would fight any cuts. The FAECT Minesota State Highway Engineers have been asked to gather data on the need of expansion instead of curtailment of the valuable highway work. This will be presented to the House by Congressman Bernard.

Communications

(*Continued from Page* 5)

continue. An interesting phase of this explanation is that most of the very high frequency bands have a short range, sometimes limited to the visible horizon, thus permitting many stations to use the same band without interference.

Television has already reached the stage at which the question is rather what is holding it back than what are the possibilities. "It is desirable," the report states, "that before any system of transmission be standardized . . . [it be clear] that the system under consideration is the best available, that it is adaptable to continual improvement wiihout rendering existing equipment obsolete and that all organizations wishing to transmit . . . will employ the standard system." When a transmission system is settled upon it is believed that receivers can be marketed at about the cost of a home refrigerator.

Likely to come before television is the less publicized facsimile broadcasting. There are already available devices which, attached to an ordinary radio will print a newspaper complete with pictures right in the home.

This raises a disquieting possibility. Radio development so far have provided large gains in employment—because they created new desires rather than offering alternate satisfactions for old ones. But it may be that we are approaching the point where radio—audible, television, and facsimile—will replace existing modes of news distribution, very likely at considerable labor savings.

Let's Have Highways

(*Continued from Page* 5)

Niagara's famous Honeymoon Bridge collapsed. It should be rebuilt. There are thousands of persons idle, begging for work in that Eastern Area. And the one, the only reason advanced for not setting to work immediately with this Labor is that burning indictment of our intelligence, "there is not the money available." Why, Mr. Engineer, why have you not attacked this problem?

To return to our original problem, national highways, we see that the economic problem is a major part of the whole engineering problem.

A system of national highways must be started with surveys, plans, and then construction, on land purchased by the United States Government. They must be located and designed under absolute and rigid engineering control, by employes operating under a strict civil service status. The construction must be done by the national government, either by contract or by direct labor, and should also be absolutely free from the political machinations of groups motivated by sectional and selfish jealousies.

Intelligent thought, from an engineering point of view, must give the lie to opinions voiced by some moss-backed professors of highway design who prate about the human system not being capable of speeds over fifty to sixty miles an hour — safely. Automobile manufacturers have produced, for our present horse and buggy roads, machines which are safer at speeds of sixty miles an hour today than the 1920 automobile was at 35 miles per hour. Present day designs in automobiles, with the great improvement in elimination of vibration, the increased riding comfort, with its accompanying elimination of fatigue, are ample indication of what can be done for us if we are given some place to drive a vehicle of improved design. We find ourselves in the analogous position of having a racing mount with a plowed field to run it in. It would be much safer on a track where it could run smoothly than on a plowed field where it might stumble. Our present day roads hobble our possibilities in the same manner.

Let America's engineers accept the challenge offered them to make this program work. Let them accept the whole job, engineering, economic, and scientific. Let's have some Highways!

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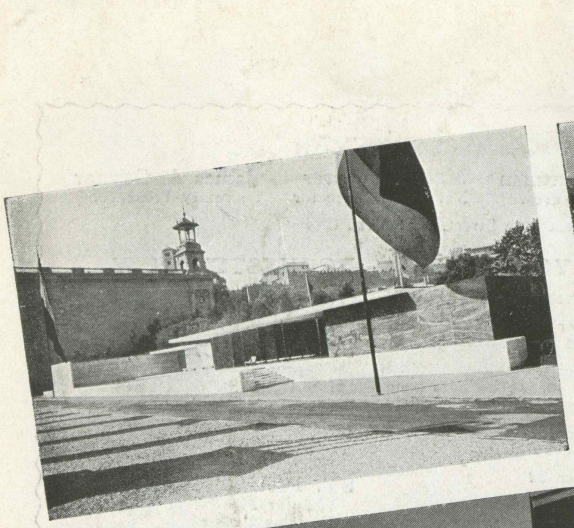

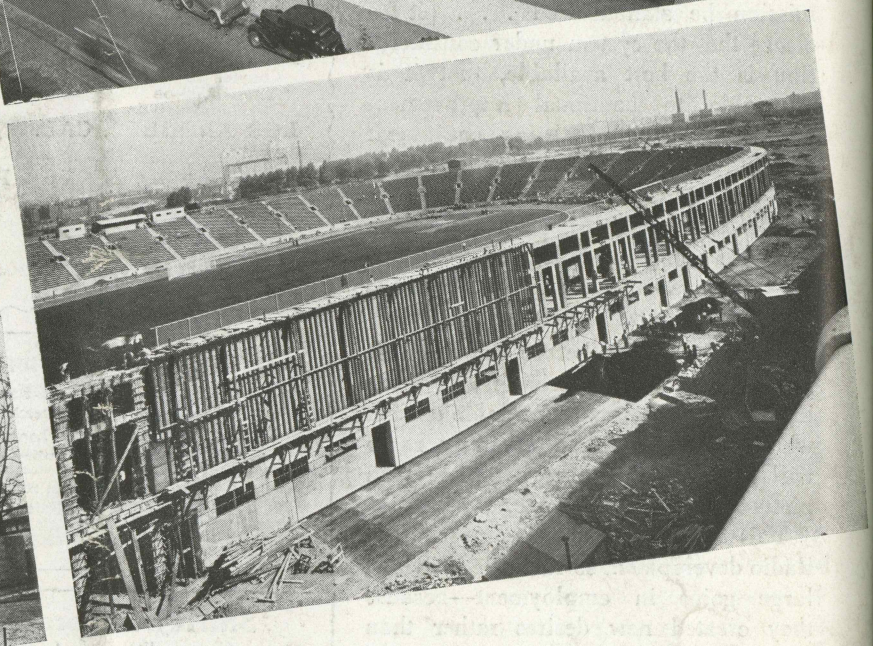

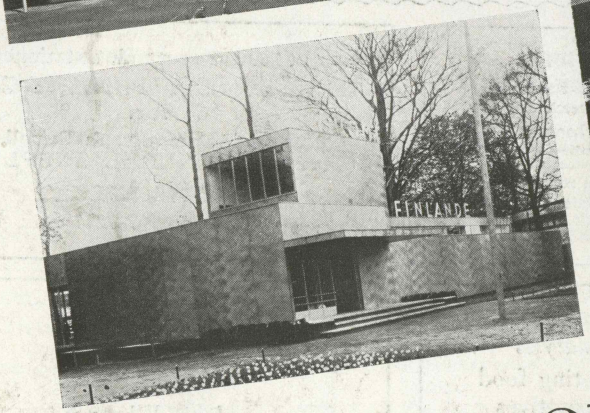

NOT SUCH RANDOM SHOTS

Architects, Engineers, Chemists, Technicians, are generally on the run, tracking down not such random camera shots. A bridge, a construction job, a highway, a laboratory, a design theme, a government project, make cracker-jack subjects for the camera fans, candid and not so candid. TECHNICAL AMERICA wants those camera shots. In fact, we are announcing A Shot of the Month Contest, open to all readers of TECHNICAL AMERICA. We will pick what we consider the best shots—they must be pictures of buildings, industrial plants, power houses, etc., anything of technical interest—and publish the best shot each month. Outstanding shots will be considered for our front cover, and we invite all readers to try especially to secure front-page shots. For publication in the April issue, all entries must be in this office by the 25th of March. MAIL YOUR ENTRIES NOW for the SHOT OF THE MONTH CONTEST.

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